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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,789	01/22/2002	Amit Antebi	100/02139	5989

44909 7590 11/14/2006

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EXAMINER

LE, UYEN CHAU N

ART UNIT PAPER NUMBER

2876

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,789

Applicant(s)

ANTEBI ET AL.

Examiner

Uyen-Chau N. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 139-167, 277-278, 280- 291 and 293-299 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 139-167, 277-278, 280- 291 and 293-299 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Prelim. Amdt/Amendment

1. Receipt is acknowledged of the Amendment filed 02 February 2005.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 139, 142-143, 145-150, 157-161 and 166-167 are rejected under 35 U.S.C. 102(b) as being anticipated by Carroll et al (US 5,517,194).

Re claims 139, 142-143, 145-150, 157-161 and 166-167: Carroll et al discloses a transponder 40, which serves as a smart card comprising: a memory 48 for storing information; at least one transmitting or receiving antenna 42, and a low frequency circuit 72 for handling information associated with the antenna 42 and the memory 48, which information is modulated at a modulation frequency of between 5 kHz and 100 kHz (e.g.,

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62.5 kHz) (see fig. 3; col. 13, lines 4+ and col. 15, lines 54-67); wherein the at least one antenna comprises a combined antenna for both reception and transmission (fig. 3); wherein the at least one antenna 42 comprises an array antenna (fig. 3); wherein the at least one antenna comprises an RF antenna (fig. 3; col. 12, lines 20+); a processor 10 for processing the information; wherein the processor 10 generates a response to an interrogation of the smart card 40 (col. 20, line 44 through col. 21, line 13); wherein the memory comprises a long-term memory, a temporary memory; wherein the modulation frequency is less than 80 kHz (e.g., 62.5 kHz); wherein the modulation frequency is over 17 kHz (e.g., 62.5 kHz); wherein the at least one antenna comprises a piezoelectric antenna (e.g., having RF+ terminal and RF- terminal, which transmitting power/voltage signals) (see fig. 3; col. 12, lines 1+); wherein the smart card 40 implements a two-way communication protocol (e.g., the transponder 40 transmits/receives data signals to/from the controller 10); wherein the protocol comprises an error correction protocol (e.g., to make changes) (col. 19, line 60 through col. 20, line 13).

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 139-141, 143-144, 162-165, 283-291 and 293-295 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al (US 5,914,980) in view of Hartkon (US 3,961,323).

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Re claims 139-141, 143-144, 162-165, 283-291 and 293-295: Yokota et al discloses a wireless card 400, which serves as a smart card comprising: a memory 410 for storing information; at least one transmission antenna 404 and a reception antenna 401, and a low frequency circuit 405 for handling information associated with the antenna 401 and the memory, which information is modulated at a modulation frequency of between 5 kHz and 100 kHz (see fig. 1; col. 4, lines 25-47 and col. 11, lines 4+ and lines 41+); wherein the at least one antenna [401, 404] comprises an array antenna (figs. 6 & 7); wherein the at least one antenna comprises an acoustic antenna (e.g., performs radio communication) (col. 11, line 53 through col. 12, line 3); a high frequency circuit for modulating information at higher than 200kHz, 1 MHz (col. 9, lines 1-29 and col. 11, lines 23+); wherein the high frequency modulated information is transmitted/received using an RF circuit [404, 401].

Yokota et al is silent with respect to an acoustic carrier frequency.

Hartkon teaches a transmitter/tag 8 is modulated at an acoustic/audio carrier frequency of 2-20khz (fig. 1; col. 5, lines 1-43).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the

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acoustic/audio carrier frequency of Hartkon into the system as taught by Yokota et al in order to provide Yokota et al with a transponder system that which would require less power generation (i.e., less power consumption) due to the fact that less power generation within the transponder system would perverse and prevent the electronic components from going defective. Furthermore, such modification would have been an obvious engineering variation, well within the ordinary skill in the art, for the designer of the system to select the specific frequency ranges to meet his/her optimal functioning system.

7. Claims 139, 150-156 and 280-282 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunnarsson (US 5,552,790) in view of Hartkon (US 3,961,323).

Re claims 139, 150-156 and 280-282: Gunnarsson discloses a transponder 5, which serves as a smart card comprising: a memory 8 for storing information; at least one transmitting or receiving antenna 6, and a low frequency circuit 9 for handling information associated with the antenna 6 and the memory 8, which information is modulated at a carrier frequency of between 5 kHz and 100 kHz (e.g., 32.8 kHz), which is less than 80 kHz, 60kHz, 50kHz, 40kHz (see fig. 1; col. 6, lines 16-26).

Gunnarsson is silent with respect to an acoustic carrier frequency.

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Hartkon teaches a transmitter/tag 8 is modulated at an acoustic/audio carrier frequency of 2-20khz (fig. 1; col. 5, lines 1-43).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the acoustic/audio carrier frequency of Hartkon into the system as taught by Gunnarsson in order to provide Gunnarsson with a transponder system that which would require less power generation (i.e., less power consumption) due to the fact that less power generation within the transponder system would preserve and prevent the electronic components from going defective. Furthermore, such modification would have been an obvious engineering variation, well within the ordinary skill in the art, for the designer of the system to select the specific frequency ranges to meet his/her optimal functioning system.

8. Claims 296-299 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al (US 4,942,534) in view of Nikolich (US 5,986,562).

Re claims 296-299: Yokoyama et al discloses a smart card 100 comprising a first separable part 112 including at least a memory 131 (figs. 2A and 3); a second separable part 111 comprising at least a holding element for holding the first part 112 (figs. 2B and 2B) and an electronic circuit associated with

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an operation of the first part 112 (fig. 3); wherein the electronic circuit comprises a power source, which is a battery 117 (fig. 2B; col. 4, lines 24-44); wherein the electronic circuit comprises a receiver 116 for transmitted power (col. 4, lines 24-44); wherein the electronic circuit comprises an amplifier (figs. 2B-4; col. 5, lines 18-42); wherein the electronic circuit comprises an antenna [118, 119]; wherein the first part 112 is an independently operable smart card (i.e., the IC card 112 includes CPU, EEPROM, ROM, RAM, input port, output port, etc.; thus the IC card 112 can be used independently in a contact manner); wherein the first part 112 requires the electrical circuit (i.e., of the second part 111) to operate in a contactless manner.

Yokoyama et al is silent with respect to the second part/holding means is flexible.

Nikolich teaches a tag holder 10 having a housing 12, which is formed from a polymeric material (e.g., plastic or rubber) (figs. 1-3; col. 2, lines 15-22).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the plastic tag holder of Nikolich into the system as taught by Yokoyama et al in order to provide Yokoyama with an easily

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molded and be comfortable to a tag/badge wearer, thus providing a more user friendly system.

9. Claim 277 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gunnarsson in view of Rodal et al (US 5,467,095). The teachings of Gunnarsson have been discussed above.

Re claim 277: Gunnarsson have been discussed above but fail to teach or fairly suggest that the antenna radiates or receives far field radiation.

Rodal et al teaches the antenna 14 radiates or receives far field radiation (col. 6, lines 1-5).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the teachings of Rodal et al into the system as taught by Gunnarsson in order to provide Gunnarsson with capability of interrogation in a broader range (e.g., larger area), and thus providing a more feasible system wherein the number of interrogators required in a certain area is reduced.

10. Claim 278 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gunnarsson in view of Cole et al (US 5,523,749). The teachings of Gunnarsson have been discussed above.

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Re claim 278: Gunnarsson have been discussed above but fail to teach or fairly suggest that the card transmits information without a carrier wave.

Cole et al teaches a code generation circuit of a label/card transmits a reply signal to a receiver antenna without carrier wave (col. 1, line 56-59).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the teachings of Cole et al into the system as taught by Gunnarsson in order to preserve the electronic components of the system, and thus prevents the electronic components from going defective. Furthermore, such modification would provide Gunnarsson with a capability of controlling the radiated signal for secure purpose, and therefore an obvious expedient.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patents to Hayashi et al (US 6661563 B2) is cited as of interest and illustrate to a similar structure of a card for interaction with a computer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uyen-Chau

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N. Le whose telephone number is 571-272-2397. The examiner can normally be reached on maxi-flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Uyen-Chau N. Le
Primary Examiner
Art Unit 2876

November 13, 2006